helo
GENUINE SAUNA & STEAM

Installation and User Manual **Havanna D**

ELECTRIC SAUNA HEATER: 400V – 415V 3N~

1714 – 450 – 04
1714 – 600 – 04
1714 – 800 – 04
1714 – 900 – 04

CONTACTOR BOXES:

2005 – 3 (WE – 3)

CONTROL PANELS:

1601 – 12 (RA – 12, Digi 2)
1601 – 13 (RA – 13, Digi 1)

1418 – 2 – 1517 – 3 (OT–2–PS–3)
1418 – 2 – 1519 (OT–2–PUi)

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1. Quick instructions for use of the sauna heater

1.1 Check before taking a sauna bath

1. The sauna room is suitable for taking a sauna bath.
2. The door and the window are closed.
3. The sauna heater is topped with stones that comply with the manufacturer's recommendations, the heating elements are covered with stones, and the stones are piled sparsely.

NOTE! Ceramic rocks are not allowed.

A pleasant, smooth sauna bath temperature is about 70 °C degrees.

Rearrange the sauna stones at least once a year and replace any weathered stones. This enhances air circulation between the stones, which extends the useful life of the heating elements.

If you encounter any problems, please contact the manufacturer's warranty service shop.

For additional information about enjoying a sauna bath, please visit our website at www.helo.fi

1.2 Operation of the sauna heater controls

The main switch is on the side of the contactor case. The type plate shows the position of the switch. (0 I)
For contactor case and control panel use, refer to the specific operating manuals.

2. Information for users

Persons with reduced physical and mental capacity, sensory handicap, or little experience and knowledge about how the device is operated (e.g. children), should only operate the device while supervised or according to instructions given by the persons in charge of their safety.

Make sure that children aren't playing with the sauna heater.

2.1 Sauna room

The walls and ceiling of a sauna room should be thermally well insulated. All surfaces that store heat, such as tiled and plastered surfaces must be insulated. It is recommended to use wooden panel cladding inside the sauna room. If there are heat storage elements in the sauna room, such as decorative stone, glass etc., note that these elements may extend the pre-heating period even though the sauna room is otherwise well insulated (see page 6, section 2.6. Preparing for sauna heater installation).

2.2 Recommended sauna room ventilation

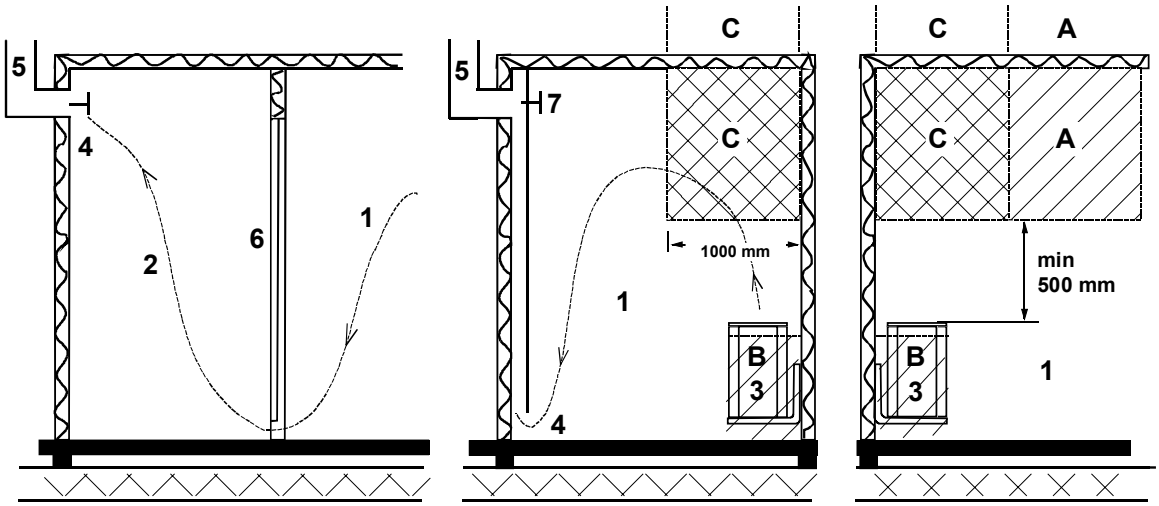


Image 1 Recommended sauna room ventilation

1. Sauna room
2. Washroom
3. Electric sauna heater
4. Exhaust valve
5. Exhaust flue or channel
6. Door to the sauna room
7. A ventilation valve can be installed here to be kept closed while the sauna is heated and during bathing.

Inlet vent can be positioned in the A zone. Make sure the incoming fresh air will not interfere with (i.e. cool down) the sauna heater's thermostat near the ceiling.

The B zone serves as the incoming air zone, if the sauna room isn't fitted with forced ventilation. In this case, the exhaust valve is installed min 1m higher than the inlet valve.

DO NOT ISTALL INLET VALVE WITHIN ZONE C, IF THE SAUNA HEATER'S CONTROL THERMOSTAT IS LOCATED AT THE SAME ZONE.

2.3 Heating the sauna

Before turning the sauna heater on, make sure the sauna room is suitable for taking a sauna bath. When heated for the first time, the sauna heater may emit some odour. If you detect any odour while the sauna heater warms up, disconnect the sauna heater briefly, and air the room. Then turn the sauna heater back on.

The sauna heater is turned on by twisting the timer knob, and the temperature is adjusted from the thermostat knob.

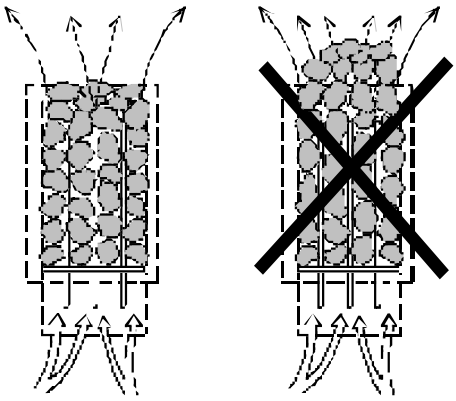
You should turn the sauna heater on roughly an hour before you plan to take a sauna bath, so that the stones have time to heat up properly and the air warms up evenly in the sauna room.

Do not put any objects on the sauna heater. Do not dry clothes on the sauna heater or anywhere in its vicinity.

2.4 Sauna heater stones

Quality stones meet the following requirements:

- Sauna stones should withstand heat and heat variation caused by vaporisation of the water thrown on the stones.
- Stones should be rinsed before use in order to avoid odour and dust.
- Sauna stones should have an uneven surface to supply a larger surface for the water to evaporate from.
- Sauna stones should be large enough, measuring about 50–80 mm to allow good ventilation between the stones. This extends the useful life of the heating elements.
- Sauna stones should be piled sparsely in order to enhance ventilation between the stones. Do not bend the heating elements together or against the frame.
- Rearrange the stones regularly (at least once a year) and replace small and broken stones with new, larger stones.
- Stones are piled so that they cover the heating elements. Do not, however, pile a large heap of stones on the heating elements. Please refer to the table on page 9 Table 1 for an adequate amount of stones. Any small stones in the package of stones mustn't be piled on the sauna heater.
- The warranty does not cover defects resulting from poor ventilation caused by small and tightly packed stones.
- Structural clay tiles are not allowed. They may cause damage to the sauna heater that will not be covered by the warranty.
- **DO NOT USE THE HEATER WITHOUT STONES.**



2.5 If the sauna heater will not heat up

If the sauna heater will not heat up, please check that:

- the power is on;
- the main fuses of the sauna heater are intact;
- is there any error messages on the control panel. In case of an error message on the control panel, please refer to the control panel instructions.

THE PERSON INSTALLING THE SAUNA HEATER SHOULD LEAVE THESE INSTRUCTIONS AT THE PREMISES FOR THE FUTURE USER.

2.6 Preparing for sauna heater installation

Check the following before installing the sauna heater:

1. The ratio of the heater's input (kW) and the sauna room's volume (m^3). Volume/input recommendations are presented in Table 1 on page 9. The minimum and maximum volumes must not be exceeded.
2. The sauna room ceiling must be min 1900 mm high.
3. Uninsulated and masonry stone walls extend the preheating time. Each square metre of plastered ceiling or wall surface adds 1.2 m^3 to the sauna room's volume.
4. Check page 9 Table 2 section for a suitable fuse size (A) and the correct diameter of the power supply cable (mm^2) for the sauna heater in question.
5. Conform to the specified safety clearance around the sauna heater.

There should be enough room around the sauna heater for maintenance purposes, a doorway etc.

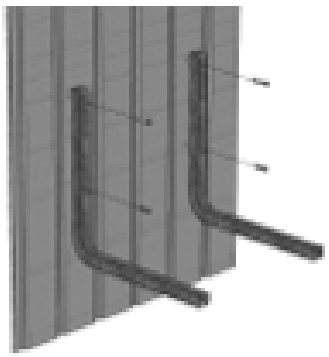
2.7 Installation

Follow the safety clearance specifications on page 9. when installing the sauna heater. Thin panel is not a suitable mounting base. The mounting base must be reinforced with timber behind the panel. The minimum clearances specified on page 9 table 1 must be followed also in case the sauna room wall materials are incombustible.

Walls or ceilings must not be clad with fibre-reinforced plaster board or other light-weight cladding, because they may cause a fire hazard.

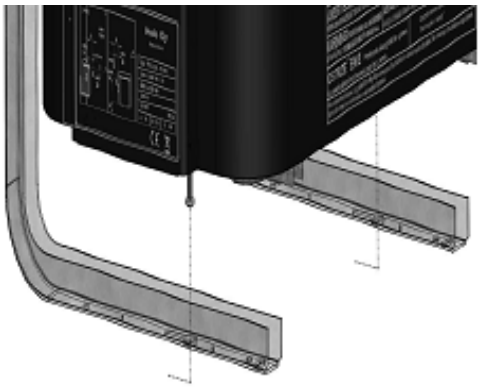
A single sauna heater is allowed per a sauna room.

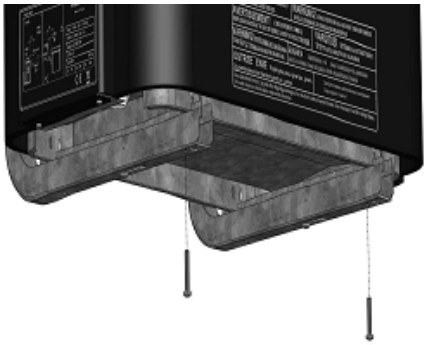
2.7.1 Installation instructions

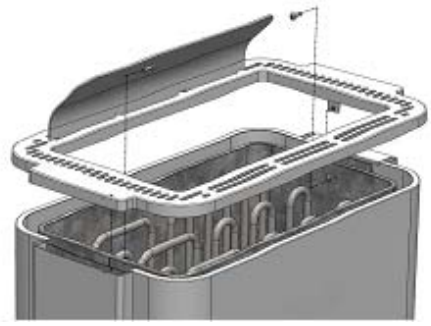


1. The wall mount is attached to the wall according to the mounting dimensions.
   The dimensions can be found on the following page.

2. Mounting the sauna heater onto the support brackets.







3. Lift the heater on the support brackets so that the connection box is situated on the open side in order to allow the installation and connection of the electric cable. If you wish to situate the connection box on the other side, the steam guide (frame of the stone compartment) must be turned over. The steam guide is fastened with two screws from the inside of the stone compartment (see image). The collar (the higher edge) of the steam guide must always be placed closest to the wall.After mounting, tighten the screws and ensure that the heater is securely fastened by lifting it carefully.

Image 2 Heaters installation

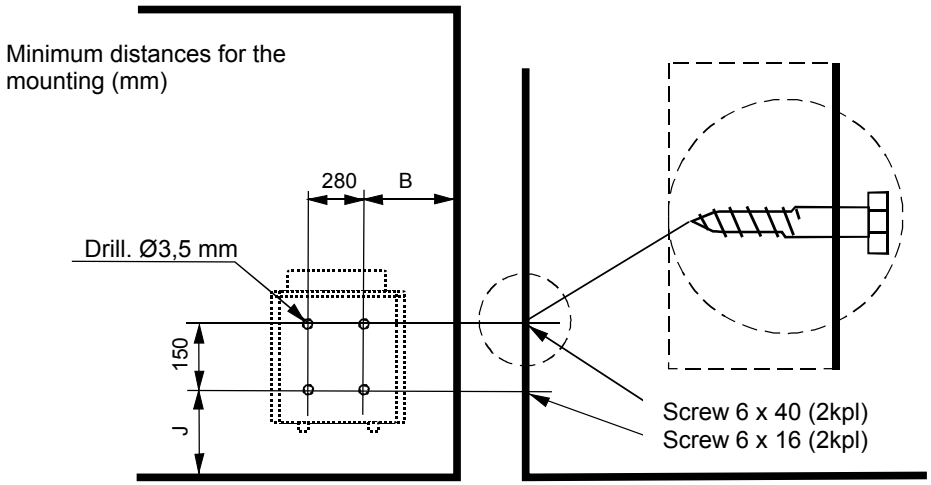


Image 3 Heaters installation

2.7.2 Heater safety distances and sensor position

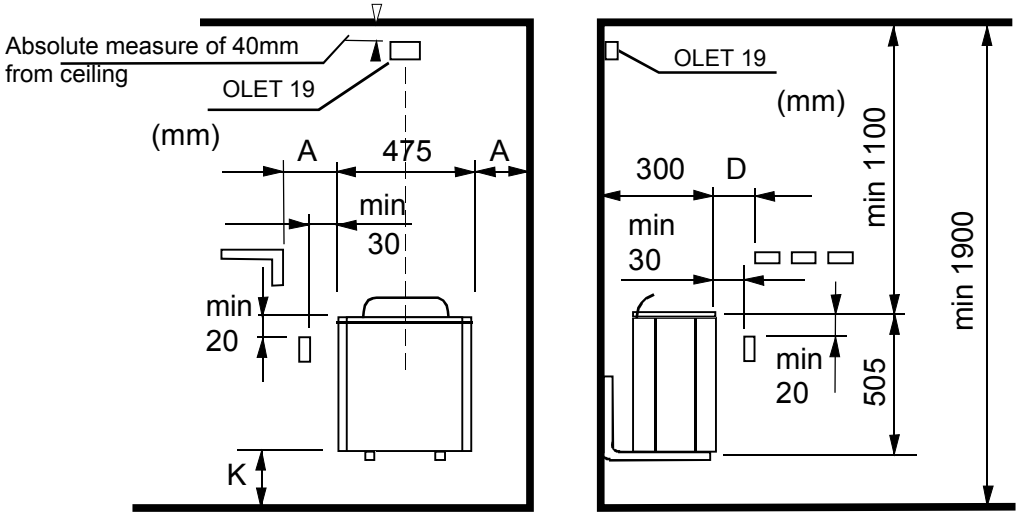


Image 4 Heater safety distances and sensor position to wall

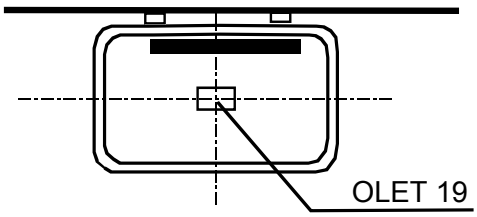


Figure 5. Alternative installation location for the sensor when using the contactor casing WE 3 and the Digi 1 or 2 control panel. Sensor OLET 19

Image 5 Sensor installation

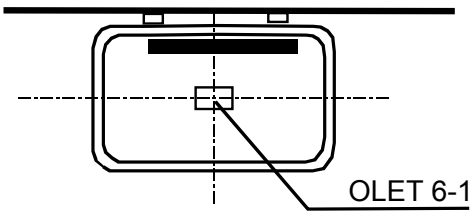


Figure 6. NOTE: Only ceiling installation when using the control panels 1418-2-1517-3 (OT-2-PS-3) and 1418-2-1519 (OT-2-PUi).
The sensor must not be installed on the wall when using the Havanna D Heater

Image 6 Sensor installation

Power	Saunaroom			Minimum distance to						Stone	
	Volume		Height	Side wall	In front of	Ceiling	Floor				
kW	min. m³	max. m³	min. mm	A mm	D mm	mm	K mm	B mm	J mm	min. Circa kg	max. Circa kg
4,5	3	6	1900	40	80	1100	120	135	245	20	28
6,0	5	9	1900	45	100	1100	120	140	245	20	35
8,0	8	12	1900	75	130	1100	150	170	275	20	35
9,0	9	13	1900	80	150	1100	150	175	275	20	35

Table 1 Safety clearances

Power kW	Power supply cable H07RN –F/ 60245 IEC 66 mm² 400V - 415V 3N~	Fuse A
4,5	5 x 1,5	3 x 10
6,0	5 x 1,5	3 x 10
8,0	5 x 2,5	3 x 16
9,0	5 x 2,5	3 x 16

Table 2 Cable and Fuse

2.8 Mains connection

The sauna heater must be connected to the mains by a qualified electrician and in compliance with current regulations. Sauna heater is connected with a semi-permanent connection. Use A07BB-F or H07RN-F (60245 IEC 66) cables or a corresponding type. Other output cables (signal lamp, electric heating toggle) must also adhere to these recommendations. Do not use PVC insulated cable as a connection cable for the sauna heater.

A multipolar (e.g. 7-pole) cable is allowed, if the voltage is the same. In the absence of a separate control current fuse, the diameter of all cables must be the same, i.e. in accordance with the front fuse. For example, in an 8 kW sauna heater the diameter of separate cables to the signal lamp and the mains control unit has to be at least 2.5 mm².

The connecting box on the sauna wall should be located within the minimum safety clearance specified for the sauna heater. The maximum height for the connection box is 500 mm from the floor (Image 7 Location for the connection box, page 10). If the connection box is located at 500 mm distance from the heater, the maximum height is 1000 mm from the floor.

Sauna heater insulation resistance: The sauna heater heating elements may absorb moisture from air, e.g. during storage. This may cause bleeder currents. The moisture will be gone after a few heating sessions. Do not connect the heater power supply through a ground fault interrupter.

Adhere to the effective electrical safety regulation when installing the sauna heater.

2.9 Electric heating toggle

Electric heating toggle applies to homes with an electric heating system.

Sauna heater has connections (marked 55) for controlling the electric heating toggle. Connectors 55 and the heating elements are simultaneously live (230V). The sauna heater thermostat also controls the heating toggle. In other words, home heating turns on once the sauna thermostat cuts power off the sauna heater.

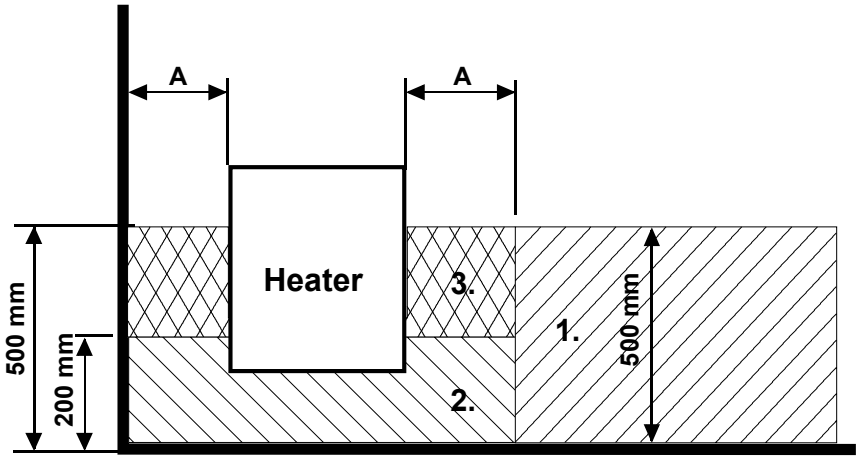


Image 7 Location for the connection box

2.10 Location the connection box for connection cable in the sauna room

A = Specified minimum safety clearance

1. Recommended location for the connection box
2. Silumin box recommended in this area.
3. This area should be avoided. Always use a silumin box.

In other areas, use a heat-resisting box (T 125 °C) and heat-resisting cables (T 170 °C). The connection box must be clear of obstacles. When installing the connection box to zones 2 or 3, refer to the instructions and regulations of the local energy supplier.

2.11 Wiring diagram

	Teho, Effekt Input, Potencia Leistung, Moc Vöimsus,Wejscie Puissance	Lämpövastukset, Värmeelement, Tennid, Heating elements, Heizeelement, Resistores Térmicos, Éléments chauffants, Elementy grzewcze, ТЭНы, 230 V			
		SEPC 93	SEPC 94	SEPC 95	SEPC 96
	kW	1500W	2000W	2670W	3000W
1714-450-04	4,5	1,2,3			
1714-600-04	6,0		1,2,3		
1714-800-04	8,0			1,2,3	
1714-900-04	9,0				1,2,3

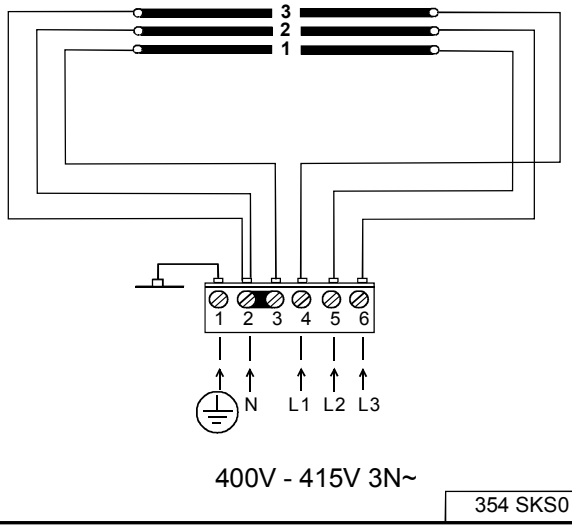
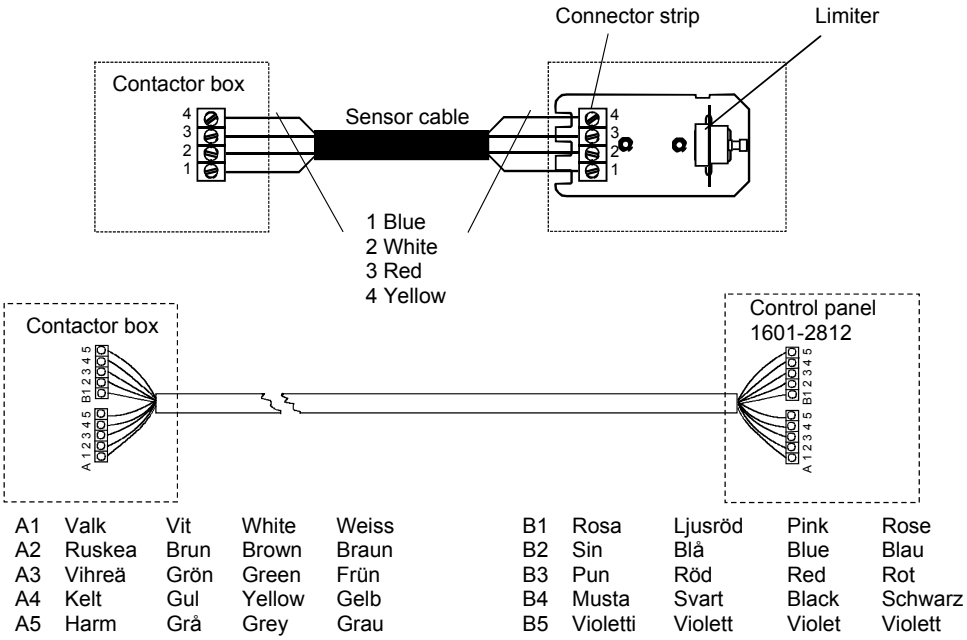


Image 8 Wiring diagram

2.12 Principle image when Digi 1601 – 12 is used as control panel



A1	Valk	Vit	White	Weiss	B1	Rosa	Ljusröd	Pink	Rose
A2	Ruskea	Brun	Brown	Braun	B2	Sin	Blå	Blue	Blau
A3	Vihreä	Grön	Green	Frün	B3	Pun	Röd	Red	Rot
A4	Kelt	Gul	Yellow	Gelb	B4	Musta	Svart	Black	Schwarz
A5	Harm	Grå	Grey	Grau	B5	Violetti	Violett	Violet	Violett

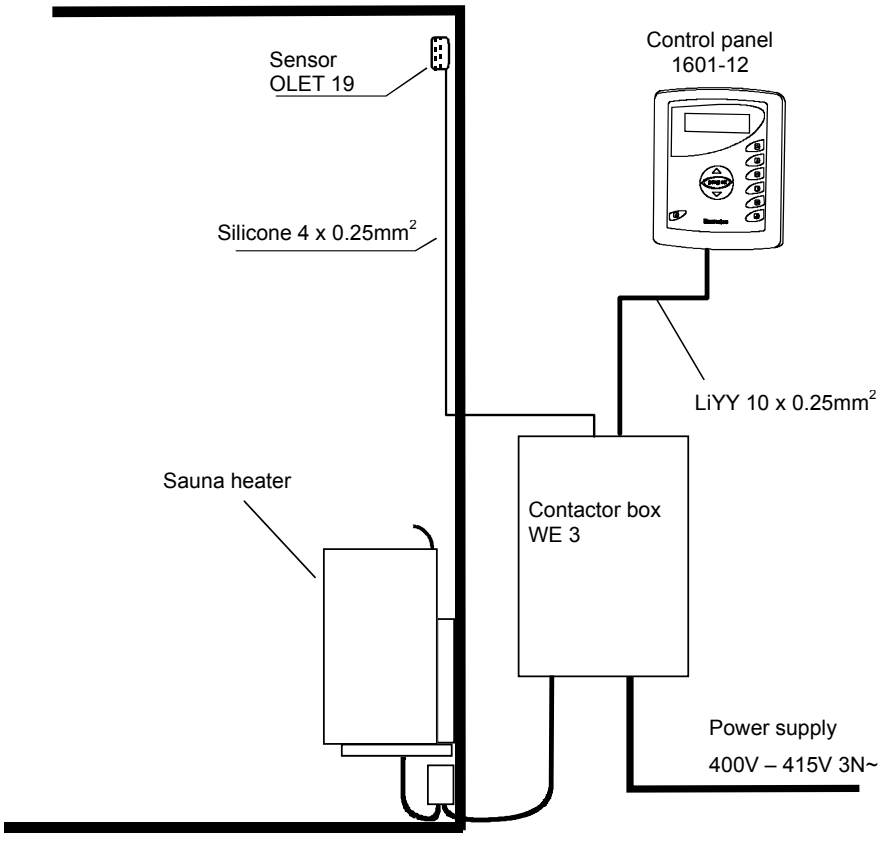
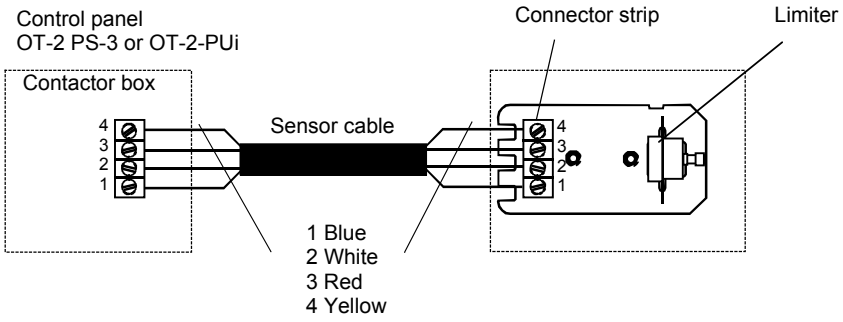


Image 9 Wiring diagram when Digi 1601 – 12 is used as control panel

2.13 Principle image when OT-2… is used as control panel



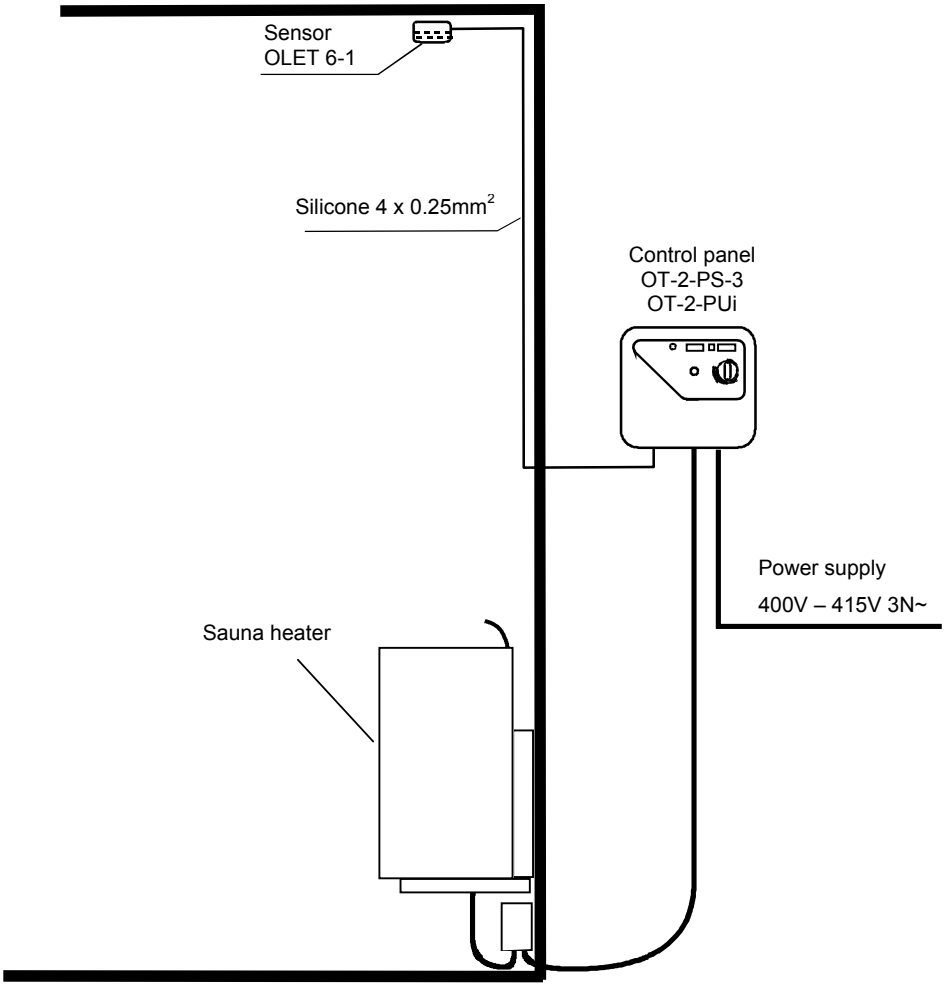


Image 10 Wiring diagram when OT 2 PS-3 or OT-2-PUi is used as control panel

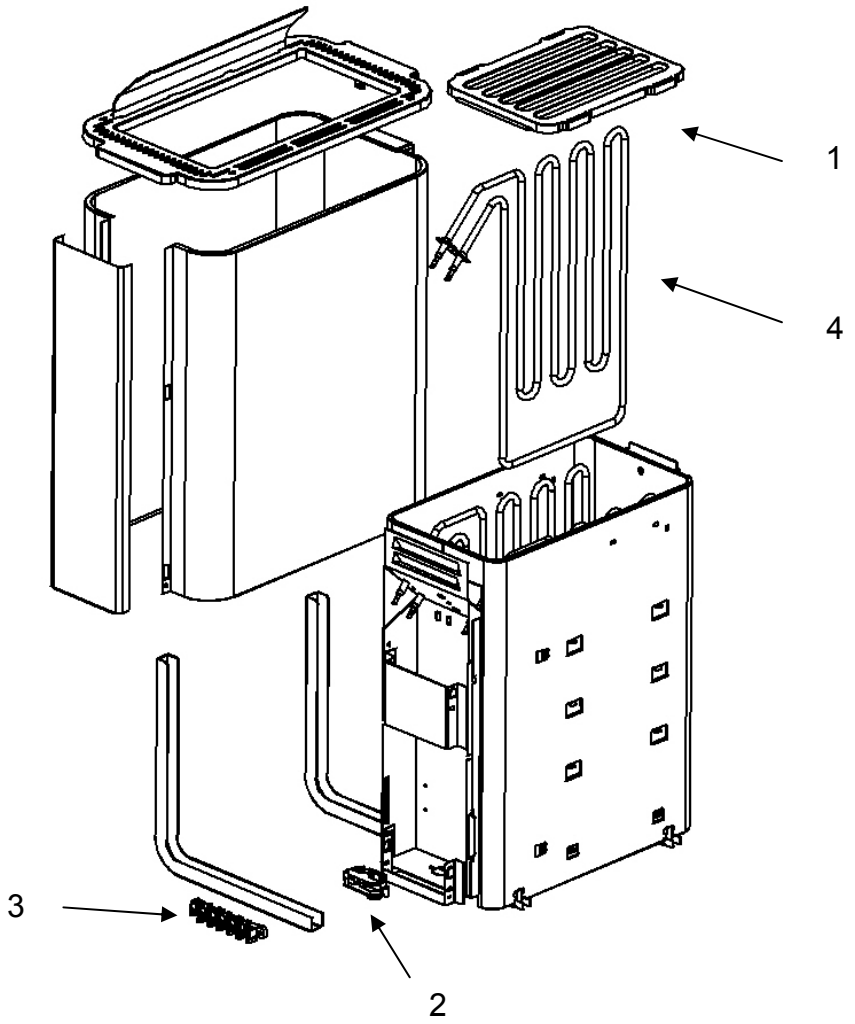


Image 11 Exploded view diagram of the heater

3. Spare parts for Havanna D-electric sauna heater

Parts	Product number	Product title	Havanna 450 D	Havanna 600 D	Havanna 800 D	Havanna 900 D
1	4069013	Havanna basic grate	1	1	1	1
2	7712000	Cable clamp NKWA 1	1	1	1	1
3	7812550	Mains connector NLWD 1-1	1	1	1	1
4	5207680	Heating element SEPC 93 230V 1500W	3	-	-	-
4	4316229	Heating element SEPC 94 230V 2000W	-	3	-	-
4	4316230	Heating element SEPC 95 230V 2670W	-	-	3	-
4	4316231	Heating element SEPC 96 230V 3000W	-	-	-	3

Table 3 Spare parts for Havanna D

4. ROHS

Ympäristönsuojeluun liittyviä ohjeita

Tämän tuotteen käyttöiän päätyttyä sitä ei saa hävittää normaalin talousjätteen mukana, vaan se on toimitettava sähkö- ja elektroniikkalaitteiden kierrätykseen tarkoitettuun keräyspisteeseen.

Symboli tuotteessa, käyttöohjeessa tai pakkauksessa tarkoittaa sitä.

Valmistusaineet ovat kierrätettävissä merkintänsä mukaan. Käytettyjen laitteiden uudelleenkäytöllä, materiaalien hydöyntämisellä tai muulla uudelleenkäytöllä teet arvokkaan teon ympäristömme hyväksi.
Tuote palautetaan ilman kiuaskiviä ja verhouskiviä kierrätyskeskukseen.

Tietoa kierrätyspaikoista saat kuntasi palvelupisteestä.

Anvisningar för miljöskydd

Denna produkt får inte kastas med vanliga hushållssopor när den inte längre används. Istället ska den levereras till en återvinningsplats för elektriska och elektroniska apparater.

Symbolen på produkten, handboken eller förpackningen refererar till detta.

De olika materialen kan återvinnas enligt märkningen på dem. Genom att återanvända, nyttja materialen eller på annat sätt återanvända utsliten utrustning, bidrar du till att skydda vår miljö.
Produkten returneras till återvinningscentralen utan bastusten och eventuell täljstensmantel.

Vänligen kontakta de kommunala myndigheterna för att ta reda på var du hittar närmaste återvinningsplats.

Instructions for environmental protection

This product must not be disposed with normal household waste at the end of its life cycle. Instead, it should be delivered to a collecting place for the recycling of electrical and electronic devices.

The symbol on the product, the instruction manual or the package refers to this.

The materials can be recycled according to the markings on them. By reusing, utilising the materials or by otherwise reusing old equipment, you make an important contribution for the protection of our environment. Please note that the product is returned to the recycling centre without any sauna rocks and soapstone cover.

Please contact the municipal administration with enquiries concerning the recycling place.

Hinweise zum Umweltschutz

Dieses Produkt darf am Ende seiner Lebens-Dauer nicht über den normalen Haushaltsabfall Entsorgt werden, sondern muss an einem Sammelpunkt für das Recycling von elektrischen und elektronischen Geräten abgegeben werden.

Das Symbol auf dem produkt, der Gebrauchsanleitung oder der Verpackung weist darauf hin.

Die Werkstoffe sind gemäß ihrer Kennzeichnung wiederverwertbar, Mit der Wiederverwendung, der stofflichen Verwertung oder anderen Formen der Verwertung von Altgeräten leisten Sie einen wichtigen Beitrag zum Schutze unserer Umwelt. Dieses Produkt soll ohne Steine und Specksteinmantel an dem Sammelpunkt für Recycling zurückgebracht werden.

Bitte erfragen Sie bei der Gemeindeverwaltung die zuständige Entsorgungsstelle.